



Summary

Draft Environmental Impact Statement

SUMMARY

S.1 Introduction

The Draft Environmental Impact Statement (DEIS) associated with the previously completed Antelope Valley Major Investment Study (AV MIS) fully considers a preferred alternative to provide and encourage community revitalization measures, contain the 100-year floodplain of Antelope Creek, and improve traffic flow in and through the core area of Lincoln, Nebraska. A No-Action Alternative is also fully considered. The AV MIS was undertaken by the City of Lincoln, the University of Nebraska-Lincoln (UNL), and the Lower Platte South Natural Resources District (LPSNRD)—known collectively as the Partners. Together, the Partners have worked closely with all interested parties to study, create, and study again alternatives that in a balanced and interdependent manner aim to solve the objectives identified. Technical reports and other materials that support the findings reported are referenced in this EIS.¹

The DEIS was prepared *after* the range of alternatives had been narrowed, and is consistent with Option 1 of the US Department of Transportation (DOT) October 1993 final ruling on Statewide and Metropolitan Planning. The DEIS and environmental review process are also in full compliance with the National Environmental Policy Act (NEPA). Under NEPA, the US Federal Highway Administration (FHWA) is the lead agency, and the US Army Corps of Engineers (Corps) and the US Department of Housing and Urban Development (HUD) are cooperating agencies. The Nebraska multi-agency agreement to coordinate different environmental and permitting process--NEPA /404 MERGE--has been followed throughout the Antelope Valley Study.

To identify the reasons why Lincoln's core area should be improved, a discussion and analysis of the purpose of and need for improvements was a major part of the AV MIS. Based on the public's involvement, eight very broadly defined purposes and needs were identified and adopted by the Advisory Committee. The Advisory Committee is a unique mix of interested agencies and community leaders that provides study input at regular meetings. The Advisory Committee initially consisted of about 20 members and has gradually increased to about 65 members as interest in the study has grown. Purposes and needs adopted are summarized in the text box on the following page.

The Partners recognized early the interdependence of the three key issues of community revitalization, stormwater management, and transportation, and have worked closely with the public to ultimately craft an integrated, workable solution. Throughout this effort, the Partners have sponsored over 1,000 small and large meetings with the community to identify Lincoln's needs, assisted in proposing

¹ Technical reports, which are identified in this EIS, are all incorporated by reference in this EIS. Appendix A provides a complete list of referenced reports. Copies of this EIS and the Antelope Valley Study Team reports are available for public viewing from the City of Lincoln-Lancaster County Planning Department, Suite 213, 555 South 10th Street, Lincoln, Nebraska, 68508. Copies of this EIS and Study Team reports are also available for viewing at city public libraries and available for purchase at Kinko's Copies, 1201 Q Street, Lincoln, Nebraska, 68508.

Purpose and Need Statement

Stormwater Management. Flooding of Antelope Creek would cause serious property damages and locally adopted floodplain management regulations prohibit most development in the floodplain. There is a need to define a floodway and reduce the 100-year floodplain along Antelope Creek through the study area.

Land Use Patterns. Different neighborhoods and land uses have grown in unplanned ways, potentially causing some land to be underutilized and creating conflicts among various interests. Citizens have identified a need to better define “edges” of neighborhoods.

Traffic Operations. There is a need for improved traffic operations in the Antelope Valley area. Continued traffic growth is expected in Lincoln, thereby increasing traveler delays. In addition, missing north-south and east-west connections in the street system and a lack of alternatives cause “through” drivers to use neighborhood streets.

Safety. Ever busier railroads increase the potential for accidents near grade crossings. Traffic through area neighborhoods creates safety conflicts for elderly residents, children, and students crossing streets. There is a need to reduce the potential for accidents at the railroad crossings.

Youth Recreation. Recreation facilities, parks, and open space are in short supply in the older city neighborhoods. Citizens have identified a need for additional youth recreation opportunities.

Trail continuity. Actively used bicycle and hiking trails approach downtown but are not connected as a network for highest use, highlighting the need to connect the existing trails.

Neighborhood Cohesiveness. Neighborhood residential, economic, and social health depends, in part, on access to good housing, shopping, and medical services.

Downtown Vitality. Area businesses need a competitive reason not to leave downtown for new development areas at the City's edges.

solutions to those needs, and served as a catalyst for preserving and encouraging development within the core area. As a result of these efforts, well over 100 alternatives were initially devised to meet the identified needs.

Screening of the 100+ alternatives to a manageable number has been a lengthy and all-inclusive process. As a result of the process, a “Draft Single Package” was eventually born and painstakingly refined by the study participants to minimize social, economic, and environmental impacts and maximize public acceptability. Environmental impacts factored heavily in the screening process, and results of the intermediate environmental analysis findings are contained in an *Environmental Assessment Status Report* and an *Environmental Assessment*, both of which were prepared in 1997. Although a number of alternatives were eliminated from consideration during the screening process, those eliminated did *not* satisfy the identified study needs. As

such, they were dismissed by citizen and elected official consensus from further consideration of other environmental impacts. The feasible alternatives evaluated in detail in the DEIS, therefore, include only the preferred alternative (the Amended Draft Single Package) and the No-Action Alternative. Plans of the Amended Draft Single Package are provided in Appendix I.

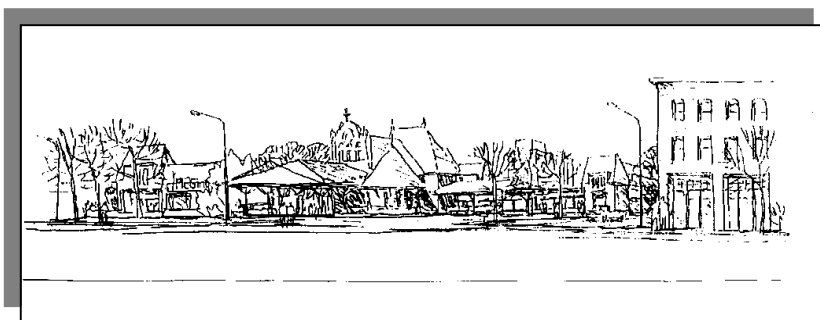
S.2 Description of the Proposed Action

The Amended Draft Single Package is composed of three equal parts: community revitalization, stormwater management, and transportation improvements. The interdependent parts of the Amended Draft Single Package are displayed in the fold out map in the front of this chapter.

Community Revitalization. The broad-based vision includes:

Neighborhood Vitality, encouraging a new ± 3 700 square meter ($\pm 40,000$ square foot) downtown supermarket at the northeast corner of 19th and O Streets, mixed-use development downtown, and closer-to-home strategies. The latter strategies would typically include linking unconnected or fragmented sidewalks, neighborhood theme, traffic calming, and other measures.

Land-Use Patterns, including overlay districts to encourage development along a



common neighborhood theme, stormwater conveyance-related parks and mixed-use development to buffer potentially conflicting land uses, and the successful marketing of well-located public properties for redevelopment.

Downtown Vitality, including encouraging new downtown housing in the form of townhomes and mixed-use development as well as a new employment center.

Trail Continuity, including a new bike path linking existing trails with a safe route around downtown. The path would parallel Antelope Creek east of downtown, border the UNL City Campus to the north, proceed south through the Haymarket, and turn west at G Street. The trail would complete its loop near Lincoln High School where it connects with Antelope Creek's existing trail.

Recreation, including a new 13-hectare (33-acre) Northeast Community Park south of the railroad tracks between 28th and 32nd Streets.

Health and Human Services, including a new medical clinic in the vicinity of Holdrege and 27th Streets as part of a "wrap-around center." "Wrap-around centers" are shown at five locations inside or near the study area. Wrap-around centers create efficiencies by having several agencies locate and work together to provide community services at a single location. These services are neighborhood-based and customized to meet the particular needs of each neighborhood. Places for consolidating agencies who provide community services at a central location would be provided in at least five locations, including Elliott Elementary School, North 27th Street/Salvation Army Community Center, historic Whittier Junior High School, Clyde T. Malone Community Center, and the Indian/Armory Center.

- **Stormwater Management.** A new stormwater conveyance channel and improvements to the existing channel would combine to provide a new system extending from J Street, northward, to Salt Creek. At N Street, the new channel would extend northwest from Muni Park, paralleling 21st Street on the east side. The channel would gradually turn westward one block beginning at R Street to the western border of Trago Park, turn due northward, and continue to Vine Street, where it would reconnect with the existing channel to Salt Creek. The conveyance system would fully accommodate the 100-year storm within its banks, would ease development restrictions on land currently within the floodplain, and would provide an opportunity for a continuous bike trail around downtown. The conveyance system would contain a small stream, parallel bike path, landscaping, and picnic areas and, thus, would be a visual and recreational amenity for the adjacent neighborhoods.
- **Transportation Improvements.** A new North-South Roadway would be provided in the 19th Street corridor from K Street along the east side of the UNL City Campus, curving along the east side of UNL's Beadle Center, continuing north and west to and over the Burlington Northern Santa Fe (BNSF) mainline railroad, and connecting to 14th Street near Military Avenue. The North-South Roadway would initially be four lanes and ultimately be six lanes wide, depending on traffic demand, and would include a landscaped median. It would intersect a new East-West Roadway on structure at a signalized intersection near the BNSF mainline railroad. The East-West Roadway would extend from 10th and Avery Streets eastward, first on the south and then, after the North-South Roadway intersection, on the north side of the parallel BNSF railroad. It would continue north to Cornhusker Highway and to Superior Street. Connections between the East-West Roadway just east of 27th Street to Adams Street and Huntington Avenue would also be provided, and would pass beneath the railroad mainline north of a proposed Northeast Community Park. A number of connections to local streets would also be provided. The transportation improvements would provide better traffic flow for regional traffic, thereby removing traffic from neighborhood and UNL streets, as well as improving safety by removing four existing at-grade railroad crossings.

S.3 Other Major Actions Within the Study Area

Other major actions within the study area include those actions listed in the City of Lincoln's Capital Improvement Program (CIP). Improvements within the study area that were considered for this analysis are limited to those related to community revitalization, stormwater management, and transportation. Given the likelihood that these actions will be undertaken, they are automatically included in the Amended Draft Single Package and the No-Action Alternative traffic volumes. These improvements are displayed in Chapter 2 of the DEIS and are summarized below:

- **Community Revitalization.** The City's Urban Development Department is advancing several projects in the vicinity, including:
 - Q, O, P, R/North Haymarket Redevelopment (Block 35 and Journal-Star Haymarket Square)

- 12th Street Revitalization Area
 - Haymarket Area Pedestrian Improvements (along O Street from 7th to 9th Streets)
 - Block 55 Redevelopment Project (landscape improvements along O Street, from 10th to 11th Streets)
 - North 27th Street Redevelopment (economic revitalization along 27th Street from N Street to the overpass at Leighton Street)
 - Focus Area Revitalization Activities (typically including sidewalk construction, alley construction, park development, and tree planting)
 - Market Place Improvements (street and pedestrian improvements along six blocks of P Street, from Haymarket at 9th Street to Centennial Mall)
 - O Street Landscape Redevelopment (9th to 10th Streets and 13th to 16th Streets)
- **Stormwater Management.** There are no stormwater management improvements listed on Lincoln's CIP in the vicinity.
 - **Transportation Improvements.** There are two bridge replacement projects and one roadway widening project in the vicinity. The bridge replacements include Cornhusker Highway at Salt Creek and Charleston Street at Salt Creek. Cornhusker Highway, from 18th to 33rd Streets, will be widened to a four-lane roadway with multiple turn lanes and new signals and lighting.

In addition, improvements along Market Street are anticipated, including parking, and sidewalk improvements between Haymarket at 9th Street to the Centennial Mall.

S.4 Reasonable Alternatives Considered

Study alternatives considered in the DEIS include the Amended Draft Single Package (discussed in #2, above) and the No-Action Alternative, which includes the items listed in #3, above. Specifically, the No-Action Alternative includes:

- **Community Revitalization.** Programs designed to improve the quality of life in Lincoln's core would not benefit from the opportunities otherwise presented through the Amended Draft Single Package's stormwater management and transportation elements. CIP projects of the No-Action Alternative would focus on smaller areas than the AV MIS area, so less benefit would be realized.
- **Stormwater Management.** The existing stormwater channel would continue to provide conveyance for less than the five-year storm. Storms of greater magnitude would cause flooding in the Antelope Creek drainage basin. The area of potential flood damage would not be reduced or eliminated. Future flood losses and the possibility of injuries and loss of life would not be reduced.
- **Traffic Improvements.** Through traffic would continue to use neighborhood and UNL streets. Safety concerns at railroad grade crossings at 14th, 17th, Adams, and 33rd Streets would not be addressed, and railroad operations would continue to affect traffic when trains are active.

S.5 Major Environmental Impacts

Potential impacts of the Amended Draft Single Package and the No-Action Alternative are discussed below under impact categories presented in this DEIS.

- **Affected Communities:** Four impact subcategories for affected communities were considered, including:
 - **Demographics:** Impacts on population and ethnic composition would be minimal with the Amended Draft Single Package. Improvements would likely attract more people to live downtown, particularly if new housing is provided for a range of income levels. No impacts on population or ethnic composition would be realized with the No-Action Alternative.
 - **Neighborhood Cohesion:** With the Amended Draft Single Package, existing neighborhood boundaries would be reinforced by new roadways and the stormwater channel, and overall quality of life for residents would be improved as traffic is removed from neighborhood streets. With the No-Action Alternative, neighborhood boundaries and quality of life would not be improved other than through separate community revitalization projects listed on the City's CIP.
 - **Community Resources:** Trail connections and recreational opportunities would be enhanced, service access to downtown residents would be improved, and some vehicle access routes would be altered (but maintained) with the Amended Draft Single Package. None of these benefits would be realized with the No-Action Alternative, and vehicle access routes would remain unchanged.
 - **Safety and Security:** With the Amended Draft Single Package, grade rail crossing removals would improve safety. Some emergency vehicle response routes would change, but access would be maintained and improved. In addition, the potential for loss of property and life during a 100-year flood would be virtually eliminated outside the channel banks. Under the No-Action Alternative, grade crossings and emergency vehicle response routes would remain unchanged. The potential loss of property and life during a flood greater than the five-year flood would remain.
- **Environmental Justice:** Under federal requirements, neither minority nor low-income populations should receive disproportionately high or adverse impacts as a result of a project. The southernmost one-fourth of the study area has the highest percentage of minority and low-income populations. While there are impacts to this area (for example, most residential buildings that would be acquired are in the southernmost study section), the southernmost study section receives many benefits from the actions, such as the containment of the 100-year flood within a conveyance channel. As a result, approximately 230 commercial or industrial structures and 560 residential structures would no longer be within the floodplain. In addition, through traffic would be drawn to new north-south and east-west roadways, and would no longer use residential streets at currently projected volumes. The AV MIS made substantive effort to meet with all segments of the community. The extensive public involvement effort -- from need identification,

alternative development, screening, to impacts -- has included representatives from the southernmost study section, including residents, leadership from neighborhood groups, and business representatives.

- **Land Use:** The Amended Draft Single Package would introduce facilities that are consistent with land uses in the study area. It is consistent with City, County, and UNL plans, and would spur downtown development/redevelopment. The No-Action Alternative would maintain mismatched land uses downtown, is less consistent with the officially adopted plans of the study Partners, and would not spur development in the Amended Draft Single Package's downtown redevelopment area.
- **Acquisition and Relocation:** With the Amended Draft Single Package, 46 residential buildings containing 48 households, and 75 privately-owned, non-residential buildings containing 44 businesses would be acquired at fair market value. Eleven publicly owned buildings would also be acquired and replaced along with three softball fields and four other UNL recreation fields/courts. Relocation assistance would be provided in accordance with federal and state requirements. Some homes deemed structurally sound and consistent with neighborhood integrity may be relocated to nearby vacant parcels as part of a separate City community revitalization program. None of these acquisitions and relocations would occur under the No-Action Alternative.
- **Economic:** Potential economic impacts studied include tax revenues and employment. In the short-term, the Amended Draft Single Package would slightly reduce annual property tax revenues. However, the long-term gains in tax revenues as the downtown redevelopment plans are realized would more than offset any short-term losses. The Amended Draft Single Package would also generate construction jobs over a 15-year period. Some jobs may relocate outside the study area through business relocations, but downtown redevelopment and some of the community revitalization measures would create new jobs for area residents. Conversely, the No-Action Alternative would see stagnant or declining tax revenues in Lincoln's core, far less construction-related employment, and little long-term job creation.
- **Pedestrians and Bicyclists:** The Amended Draft Single Package would provide positive, long-term impacts on the bicycle and pedestrian environment. Working, living, playing, and shopping in Lincoln's core would be promoted by new trails and full connections to existing trails. Safety would be enhanced as pedestrians and bicyclists are separated from motor vehicle and rail traffic. Some short-term disruptions or detours around existing trail connections would occur, but would only be temporary. The No-Action Alternative would see none of the long-term benefits or the short-term disadvantages associated with the Amended Draft Single Package.
- **Air Quality:** Based on study area modeling, carbon monoxide levels would not exceed the National Ambient Air Quality Standards (NAAQS) at any of the worst-case Amended Draft Single Package intersections studied. Other pollutants were not considered since Lincoln is in attainment of the NAAQS for all pollutants.

Unavoidable short-term impacts caused by construction equipment emissions and airborne dust would occur, but would be minimized and mitigated by incorporating Best Management Practices in contract documents and adhering to them. With the No-Action Alternative, air quality at over-capacity intersections would be worse than under the Amended Draft Single Package since cars would idle longer at over-capacity intersections. Additional information is contained in technical Appendix F to the DEIS.

- **Noise:** With the Amended Draft Single Package, 15 study area properties have been identified with a noise impact as defined by the FHWA. Of these, 12 are residential, two are commercial, and one is recreational. A range of actions to mitigate noise was considered, including constructing noise barriers, or installing acoustical windows. The City may also choose to establish buffer zones through zoning to limit development in areas where traffic noise is incompatible with land uses. These impacts would not occur under the No-Action Alternative. Additional information is contained in technical Appendix B to the DEIS.
- **Vibrations:** With the Amended Draft Single Package, no adverse long-term impacts are anticipated since roadway vibrations at the UNL Beadle Center—where sensitive microscopes are in use—are less than those already caused by the building’s mechanical systems. Short-term impacts would occur at this site, and would be managed and mitigated through an agreement between UNL, the Partners, and the construction contractor. The agreement would cover policies and procedures for when vibration-generating activities such as pile driving may occur. Additional information is contained in technical Appendix C to the DEIS.
- **Lighting:** No adverse long-term impacts are anticipated as a result of lighting the roadways of the Amended Draft Single Package since streetlights are already provided throughout much of the study area. UNL research greenhouses would not be adversely impacted since baffles or side shields would be placed on nearby lights to direct light toward the roadways and away from the greenhouses. The No-Action Alternative would not impact nighttime ambient light levels.
- **Wetlands:** An estimated 0.36 hectare (0.90 acre) of wetlands would be affected by the Amended Draft Single Package. Mitigation for freshwater wetland impacts would be made at a 1.5:1 replacement ratio unless affected wetlands are replaced with higher value saline wetlands. Five potential mitigation sites are currently under investigation. A General Section 404 permit from the Corps pursuant to the Clean Water Act would apply to a bridge crossing at Salt Creek. Other Antelope Creek crossings would be included in one Individual Section 404 permit. Permit applications would be prepared during final design, prior to construction. Additional information is contained in a technical appendix to the DEIS. These permits would not likely be required under the No-Action Alternative, with the exception of the bridge work included in Lincoln’s CIP.
- **Floodplains:** With the Amended Draft Single Package, the Antelope Creek floodplain would be reduced to a channel, resulting in 835 fewer structures within the floodplain, increased development opportunities, and improved aesthetics and

recreational opportunities. With the No-Action Alternative, flooding associated with Antelope Creek would continue to threaten 835 structures, development opportunities would remain limited, and aesthetics and recreational opportunities would be unchanged.

- **Threatened and Endangered Species:** No threatened and endangered species are located within the study area and, therefore, no adverse impacts are anticipated under the Amended Draft Single Package and the No-Action Alternative.
- **Farmland:** A Farmland Conversion Impact Rating completed for the Amended Draft Single Package indicated the total score assigned to that alternative is 89 out of a total 260 points. This is far lower than the US Department of Agriculture's threshold of significance and, therefore, no adverse impacts are anticipated. Farmland would not be directly impacted by the No-Action Alternative, but development pressures along Superior Street unrelated to this study would likely eventually cause the development of a large parcel of farmland on the south side of the street.



- **Water Quality:** The Amended Draft Single Package would have no long-term adverse impacts on the chemical or biological constituents in water of Antelope and Salt Creeks and Dead Mans Run. Short-term adverse impacts to water quality may occur, but would be mitigated through contract provisions requiring the use of Best Management Practices during construction to control erosion and sedimentation. The No-Action Alternative would similarly have no long-term adverse impacts on the creeks. Short-term impacts of the No-Action Alternative would be limited to projects associated with Lincoln's CIP.
- **Water Body Modification:** The Amended Draft Single Package would provide long-term wildlife and aquatic habitat improvements through an increased length of open stream, improved channel cross section, a continuous landscaped greenbelt, and a new pond. Unavoidable short-term disturbances to habitat and increases in turbidity and total suspended solids would be minimized through contractor adherence to Best Management Practices. Short-term impacts of the No-Action Alternative would be limited to projects associated with Lincoln's CIP.

- Cultural Resources:** The Amended Draft Single Package alignments and character avoid adverse effect on any protected cultural resource, except the environs of the State Arsenal (in the NRHP) and five houses, potentially eligible for listing in the National Register of Historic Places (NRHP). Mitigation to protect the arsenal may include improved displaying area around the building. The historic houses may be relocated under the City's community revitalization program. However, if it is determined that any of them cannot be moved, such buildings would be documented following procedures of the Historic American Buildings Survey (HABS) prior to being removed. Also, under a worst-case scenario, three potentially National Register-eligible archeological sites would be impacted by the Amended Draft Single Package. By agreement with the State Historic Preservation Officer (SHPO) any artifacts found during field investigations (once access to the three potential archeological sites is granted), would be recorded prior to roadway construction. Consultation with the SHPO required under Section 106 of the National Historic Preservation Act (NHPA) has completed the Determination of Eligibility and Determination of Effect stages. The Section 106 parties will complete a Memorandum of Agreement (MOA). No impacts to cultural resources are anticipated under the No-Action Alternative.
- Environmental Risk Sites:** Based on a search of federal and state databases, nine potential hazardous substance release sites, 51 known petroleum release sites, and 59 potential petroleum release sites are located adjacent to components of the Amended Draft Single Package. Mitigation measures include avoiding the sites, removing the contaminated media or building materials, or treating contamination on-site. All mitigation would be carried out in full compliance with Nebraska Department of Environmental Quality (NDEQ) regulations. Additional information is contained in a technical appendix to the DEIS. The CIP components of the No-Action Alternative have the potential to encounter environmental risk sites throughout the study area, with similar mitigation and environmental compliance required.
- Visual:** The elements of the Amended Draft Single Package would blend together and visually complement the study area in most locations. The intersection of the North-South and East-West Roadways, however, would be elevated approximately 9 meters (30 feet) above grade, and would be visible in the surrounding vicinity—thus, changing the existing visual character. The few important views in the study area, such as that of the State Capitol, would not be negatively impacted. Landscaping (particularly along the stormwater channel), architectural treatments (such as new design standards as part of an overlay zoning district), and surface finishes (such as aesthetic features being considered along the side of a retaining wall just south of Vine Street) would minimize and mitigate impacts associated with the Amended Draft Single Package. The No-Action Alternative would not affect existing views, nor would it provide the aesthetic elements associated with the Amended Draft Single Package.

- **Energy:** Long-term energy consumption associated with the Amended Draft Single Package would be slightly lower than that associated with the No-Action Alternative. The one-time expenditure of energy during construction would eventually be compensated by long-term energy savings and other benefits provided by the Amended Draft Single Package.
- **Physiography, Topography, Geology and Soils:** The study alternatives, including the Amended Draft Single Package and the No-Action Alternative, would not affect surface or subsurface characteristics within the study area other than the Amended Draft Single Package would narrow and contain the 100-year floodplain of Antelope Creek.
- **Wild and Scenic Rivers, Coastal Barriers, Coastal Zones:** No such resources are present within the study area and, therefore, neither the Amended Draft Single Package nor the No-Action Alternative will affect these resources.
- **Permits:** Among those permits and compliances necessary for the Amended Draft Single Package are: US Army Corps of Engineers Section 404 of the Clean Water Act, Section 401 Water Quality Certification (NDEQ), City of Lincoln/Lancaster County Floodplain Development Permit, and National Pollutant Discharge Elimination System Permit. Agreements with the BNSF Railroad and area utilities are also necessary.
- **Construction:** Short-term impacts associated with the Amended Draft Single Package include traffic, air quality, soil erosion, water quality degradation, noise, and vibration. Appropriate mitigation would be provided for all identified impacts. These impacts are also associated with the No-Action Alternative's CIP projects.
- **Relationship Between Short-term Uses of Man's Environment and the Maintenance and Enhancement of Long-term Productivity:** Numerous benefits would be derived by constructing the Amended Draft Single Package. More consistent land use patterns in central Lincoln would evolve, socioeconomic systems would benefit from private investment opportunities, through traffic would be removed from residential neighborhoods, safety would be improved at railroad crossings, and access to goods and services in Lincoln's core would be improved. Impacts to ecological systems would be minimal. These benefits would not be realized with the No-Action Alternative.
- **Any Irreversible and Irretrievable Commitments of Resources Which Would be Involved in the Proposed Action:** Implementing the Amended Draft Single Package involves committing land (during construction), fossil fuels, labor, and construction materials. These resources are not in short supply, and the long-term impacts of committing them are positive.
- **Secondary Impacts:** A number of the community revitalization components are secondary actions since they are dependent on containing the Antelope Creek floodplain and/or providing better access to and from Lincoln's core. These components include the downtown supermarket, downtown mixed-use

development, stormwater conveyance-related parks, new downtown housing, and trails. The impacts of these actions are overwhelmingly positive. Other actions that are planned (sometimes by others) to occur include redevelopment of State Fair Park, construction of a new health clinic, and the relocation of displaced housing to vacant, in-fill sites.

- **Cumulative Impacts:** Other reasonably foreseeable actions include those projects contained in the City of Lincoln's CIP. Since most of these projects would be constructed with or without the Amended Draft Single Package, the traffic volumes associated with these projects have been considered throughout.
- **Traffic Impacts.** The recent growth in Lincoln, combined with business investment on the edge of the City, has resulted in increasingly higher traffic volumes and increasing traveler delays. The growth forecast in Lincoln is expected to result in a 44 percent increase in overall traffic as the region approaches the "Build Out Scenario," which provides the basis for the No-Action Alternative and the Amended Draft Single Package. Under the No-Action Alternative, more traffic to and from downtown uses streets that go *through* neighborhoods and UNL because there are few alternatives *around* these areas. In addition, missing connections in the street system and a lack of alternative cause "through" drivers to use neighborhood streets. Traffic impacts are as follows:

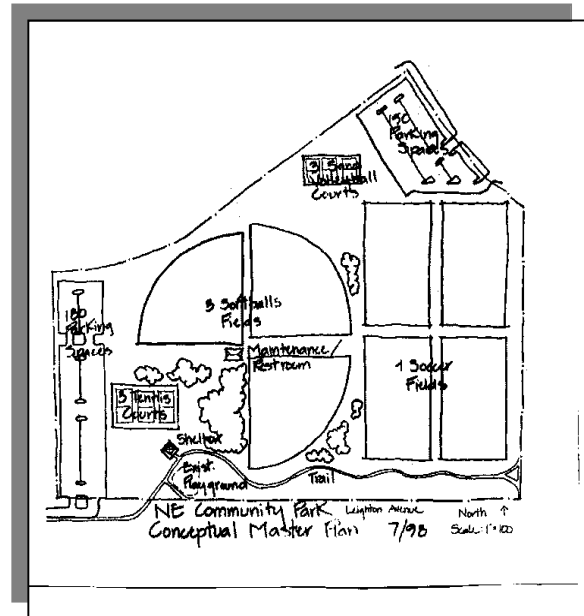
- **Intersection Levels of Service.** For the Amended Draft Single Package, only two intersections (33rd Street and Cornhusker Highway and 27th Street and O Street) of the 40 analyzed (23 existing and 17 future) are expected to operate at Level of Service (LOS) F during one or both peak hours of analysis. Level of Service measures delay experienced by the traveling public and is described in Section 5.1.2. Ten more intersections would operate at LOS E (five of which are new intersections). However, three of the five new intersections are one or two seconds from being considered LOS D. Of the *existing* intersections, six of 23 (26 percent) will operate at LOS E or F. A total of 12 out of 40 (30 percent) intersections will operate at LOS E or F with the Amended Draft Single Package.

For the No-Action Alternative, 29 intersections were analyzed. Generally, intersection operations are expected to worsen in the future compared to existing conditions by about one LOS throughout the study area. A total of 12 intersections are expected to operate at LOS F. Six more intersections would operate at LOS E, for a total of 18 of 29 (62 percent) intersections at LOS E or F with the No-Action Alternative. Therefore, a greater percentage of intersections would be over capacity with the No-Action Alternative compared to the Amended Draft Single Package (62 vs. 30 percent).

- **Access.** The angled railroad tracks in the study area create problems for traffic operations by blocking some streets from connecting over the tracks. More and longer trains block traffic on streets that *do* cross the tracks for several hours every day. Future traffic (over 77,000 vehicles per day) will continue to be subject to delays at railroad crossings at 14th, 17th, 33rd, and Adams Streets. In addition, drivers avoiding train-related delays at 14th and 17th Streets often use

the 27th Street bridge over the railroad. They continue to use Holdrege, Vine, and O Streets to downtown, thus increasing traffic on these streets. The Amended Draft Single Package eliminates the grade crossings and introduces new structures to accommodate grade-separated roadway traffic at the railroad tracks. With the No-Action Alternative, traveler delays and safety concerns at the railroad grade crossings are expected to continue.

- **Section 4(f):** The Amended Draft Single Package avoids a Section 4(f) use of the majority of the 19 parks and recreation areas and 37 sites in or eligible for inclusion in the National Register of Historic Places. Five Section 4(f) resources *would* be encroached upon and three archeological sites *may* be encroached upon by the transportation component of the Amended Draft Single Package. Therefore, there would be a Section 4(f) use of the resources. Meetings have been held with responsible officials to discuss potential Section 4(f) impacts and appropriate mitigation. They agree there are no feasible and prudent alternatives to avoid the remaining impacts, and every effort has been made to minimize harm, and mitigate impacts.



S.6 Areas of Previous Controversy

Study Scoping, interagency coordination, the AV MIS and its numerous public involvement activities, the *Environmental Assessment Status Report*, and the separate Section 106 process led to the identification of some project controversy, thus giving direction for restudying several issues associated with this DEIS. Most recently, several groups brought up issues centered on five “hot buttons,” which were resolved through numerous meetings with the Management and Advisory Committees. Resolution of hot button controversy was confirmed at an August 1998 Supercommons meeting and by City Council in May 1998.

Other study concerns surround potential impacts at the UNL Beadle Center. Areas of concern include lighting, vibrations, noise, and air quality and their effects on on-going and future research projects. Several meetings have been held with Beadle Center faculty and staff to present study findings and resolve these issues.

S.7 Unresolved Issues

Since the EIS is being written after the MIS narrowed the range of alternatives, selected a preferred alternative, and made refinements based on public sentiment, all major

environmental issues have been studied and environmental concerns about implementation will be resolved during final design.

S.8 Other Federal Actions Required

There are a number of federal permits and approvals that are necessary before the proposed action can move forward. All four areas have been coordinated with responsible officials throughout the NEPA-404 MERGE process. These include the following:

- **Section 404 Permit.** The Corps requires a permit for the discharge of dredge and fill materials in Waters of the US and their adjacent wetlands. There are streams and wetlands within the study area that would be affected by the Amended Draft Single Package, so a Section 404 permit is required prior to construction pursuant to the Clean Water Act. Appropriate mitigation measures would be provided to offset any impacts.
- **Section 106 of the National Historic Preservation Act.** Section 106 of the NHPA requires that federal projects consider the effects of actions on properties included in or eligible for inclusion in the National Register of Historic Places. The 106 process has been formally initiated with the SHPO and studies of standing structures and archeological sites have been made. The SHPO has agreed that a Memorandum of Agreement (MOA) be drafted for approval after the DEIS public hearing and before the FEIS is issued. The MOA would cover commitments to mitigation for the identified unavoidable adverse effects as well as clauses regarding buried resources discovered during construction.
- **Section 4(f) of the US Department of Transportation Act of 1966.** Section 4(f) restricts the use of public land developed as a park, recreation area, significant wildlife refuge, or significant historic site for a transportation project unless there is no feasible and prudent alternative and the project minimizes adverse impacts to the greatest extent possible. Many historic sites and parks would be avoided, but a few are unavoidably affected by the Amended Draft Single Package, so Section 4(f) requirements are applicable. The draft Section 4(f) Statement is included in this DEIS (Chapter 7) and coordination with public officials having jurisdiction over affected properties has taken place and their concurrence received. A final Section 4(f) Statement will be included in the Final EIS.
- **National Pollutant Discharge Elimination System (NPDES) Permit.** The Clean Water Act, as amended, requires EPA to control pollution from stormwater discharges. NPDES permits are required for construction activities disturbing two or more hectares (five or more acres). To ensure that pollution in stormwater discharges from construction sites is within accepted standards, pollution prevention objectives apply to discharges associated with the permit. Construction of the Amended Draft Single Package would disturb more than two hectares (five acres), so an NPDES permit would be sought prior to construction.

Non-federal permit / approval requirements are identified in Section 4.25 of the DEIS.

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